

REMARKS

Claims 49-67 and 69-81 are pending in this application. Claims 55 and 67 have been amended, and claim 68 has been cancelled.

The Examiner objected to claims 55-58 as depending upon a rejected base claim, but stated that these claims would be allowable if rewritten in independent form to include the limitations of the base claim and any intervening claims. Claim 55 has been rewritten in independent form to include the limitations of base claim 49. As claims 56-58 depend on claim 55, they are also allowable.

The Examiner stated that the application was filed with informal drawings. Applicant has submitted formal drawings with the response.

The abstract is objected to for containing legal phraseology. The abstract has been amended to overcome the Examiner's objection.

Claim 67 is objected as containing a typo. Claim 67 has been amended to change "distributer" to "disturber."

Claims 49, 50, 52, 53, 59-67, 69-73 and 81 are stand rejected under 35 USC §102(e) as being anticipated by Takeda (JP11347742A). 35 USC §102(e) states that a person is entitled to a patent unless the invention was described in "a patent granted on an application for patent by another filed in the United States before the invention by the Applicant for patent." The present application claims priority to a PCT application having a filing date of July 28, 2000, which claims priority to Great Britain patent applications filed on August 6, 1999 and October 15, 1999. Takeda was not granted on an application for patent by another filed in the United States before the invention by the Applicant for a patent. Takeda was published in Japan and was not granted and filed in the United States as required by 35 USC §102(e). The Takeda reference was published in Japan on December 21, 1999, after Applicant's latest priority date of October 15, 1999. The rejection is improper, and Applicant requests that the rejection be withdrawn.

Claims 67, 69-73 and 81 stand rejected under 35 USC §102(b) as being anticipated by DE 3535212 (Deimann). Claim 67 has been amended to include a weld pool supporting member. The Examiner admits that Deimann does not disclose a weld pool supporting member. Claims 67, 69-73 and 81 are not anticipated by Deimann.

Claims 68, 75-77 and 80 stand rejected under 35 USC §103(a) as being obvious over Deimann in view of JP 58123633 (Kawasaki). The claims require a weld pool supporting member. The Examiner admits that Deimann does not disclose a weld pool supporting member. The Examiner contends that Kawasaki teaches a weld pool supporting member 5, and it would have been obvious to one having ordinary skill in the art to employ a weld pool supporting member in Deimann. Applicant respectfully disagrees.

The claims are not obvious in view of the combination of Deimann and Kawasaki. As shown in Figures 2 and 3 of Deimann, the plasma welding apparatus welds together thick workpieces abutted against each other. There is no gap between the workpieces, and therefore the thick workpieces contact and contain the weld pool. In Kawasaki, the backing block 5 supports members 1 and 2 spaced apart by a groove 3. During welding, the backing block 5 prevents the weld material from falling through the groove 3 and between the members 1 and 2. Because the workpieces of Deimann contact each other, there is no gap between the workpieces. There is no gap between the workpieces of Deimann, and therefore there is no motivation or reason to employ a backing block to support the weld pool because the thick workpieces perform this function. The claims are not obvious, and Applicant requests that the rejection be withdrawn.

Claim 79 stands rejected under 35 USC §103(a) as being obvious over Deimann in view of JP 59212169 (Ishihara). Claim 79 claims a weld pool supporting member having a peripheral raised edge against which a workpiece is received. The Examiner admits that Deimann does not disclose this feature. The Examiner contends that Ishihara teaches a weld pool support member 2 having a peripheral raised edge against which a workpiece 11 is received, and it would have been obvious to one having ordinary skill in the art to employ a weld pool supporting member having a peripheral raised edge against which a workpiece is received in Deimann. Applicant respectfully disagrees.

Claim 79 is not obvious in view of the combination Deimann and Ishihara. As shown in Figures 2 and 3 of Deimann, the plasma welding apparatus welds together thick workpieces abutted against each other. There is no gap between the workpieces, and therefore the thick workpieces contact and contain the weld pool. In Ishihara, the backing strip 2 supports the penetration bead 3 during welding and prevents the penetration bead 3 from flowing between the

materials 1 and 1'. Because the workpieces of Deimann contact each other, there is no gap between the workpieces. There is no gap between the workpieces of Deimann, and therefore there is no motivation or reason to employ a backing strip to support the weld pool because the thick workpieces perform this function. Claim 79 is not obvious, and Applicant requests that the rejection be withdrawn.

Claim 78 stands rejected under 35 USC §103(a) as being obvious over Deimann in view of Umeno (U.S. Patent No. 5,449,107). Claim 78 claims a supporting member provided with a cooling system. The Examiner admits that Deimann does not disclose this feature. The Examiner contends that Umeno teaches a supporting member provided with a cooling system, and it would have been obvious to one having ordinary skill in the art to use a supporting member provided with a cooling system in Deimann. Applicant respectfully disagrees.

Claim 78 is not obvious in view of the combination Deimann and Umeno. Claim 78 claims a supporting member provided with a cooling system. Neither Deimann nor Umeno disclose a weld support member. Therefore, the combination of these references does not disclose, suggest or teach a weld support member. Claim 78 depends on patentable independent claim 67 and is allowable for the reasons set forth above. Claim 78 is not obvious, and Applicant requests that the rejection be withdrawn.

Claim 54 stands rejected under 35 USC §103(a) as being obvious over Takeda in view of Kelley (U.S. Patent No. 6,489,584). Takeda is not a proper reference, and the rejection is improper. Additionally, Claim 54 depends on claim 49, which is allowable for the reasons set forth above. Applicant requests that the rejection be withdrawn.

Claim 74 stands rejected under 35 USC §103(a) as being obvious over Deimann in view of Kelly. Claim 74 claims a non-consumable disturbing member. The Examiner admits that Deimann does not disclose a non-consumable disturbing member. The Examiner states that Kelly suggests a non-consumable disturbing member, and it would have been obvious to one having ordinary skill in the art to use a supporting member provided with a cooling system in Deimann. Applicant respectfully disagrees.

Claim 74 is not obvious in view of the combination of Deimann and Kelley. Kelly teaches a heat source 60 that heats a body of an article 20 with a heat source beam 72 (column 5, lines 57 to

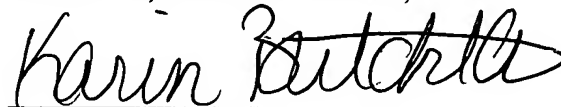
65) to create a melted region 74 to repair a defect 24. Kelly does not disclose, suggest or teach a weld pool supporting member, and nothing in Kelly supports the melted region 74 of the body 22. Neither Deimann nor Kelly teach, suggest or disclose a weld supporting member, and therefore the combination of these references does not teach the claimed invention. Applicant requests that the rejection be withdrawn.

Claim 51 stands rejected under 35 USC §103(a) as being obvious over Takeda in view of Takeda (United States Patent No. 5,728,991). Takeda is not a proper reference, and the rejection is improper. Additionally, Claim 51 depends on claim 49, which is allowable for the reasons set for above. Applicant requests that the rejection be withdrawn.

Claims 49-67 and 69-81 are in condition for allowance. A check for \$55.00 is enclosed for a one month extension of time. No additional fees are seen to be required. If any additional fees are due, however, the Commissioner is authorized to charge Deposit Account No. 50-1482, in the name of Carlson, Gaskey & Olds, P.C., for any additional fees or credit the account for any overpayment. Therefore, favorable reconsideration and allowance of this application is respectfully requested.

Respectfully submitted,

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Dated: January 23, 2004

CERTIFICATE OF MAIL

I hereby certify that the enclosed Response is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on January 23, 2004.


Karin Butchko